Oral Presentations ESVP/ECVP

O51 IMMUNOHISTOCHEMICAL CHARACTERISATION OF A CUTANEOUS PIGMENTED NEUROFIBROMA IN A PIG

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Introduction: Tumours consisting of melanocytic and neural components are diagnostic challenging and provoke questions regarding their histogenesis. Neurofibromas are benign peripheral nerve sheath tumours (PNST) arising from Schwann cells (SCs) and a mixture of perineurial cells and fibroblasts. Pigmented variants are exceedingly rare in humans. The present report describes the histological and immunohistological characterisation of a cutaneous PNST in a pig sharing features of pigmented neurofibroma in man.

Materials and Methods: A young female pig submitted for necropsy. Tissues were routinely processed for histology and immunohistochemistry using antibodies against S100, GFAP, laminin, periaxin, Sox2, p75NTR, vimentin, SMA, Melan A, and cytokeratin.

Results: Grossly, the only lesion consisted of a poorly demarcated, non-encapsulated and focally pigmented mass localised in the subcutis of the right abdominal wall. Microscopically, spindle-shaped neoplastic cells were arranged in nodules of different sizes and in short fascicles separated by extensive fibrous tissue. Focal accumulation of elongated cells containing melanin pigment was observed. Neoplastic cells within nodular formations were immunoreactive to S100, laminin, Sox2, $p75^{NTR}$ and rarely GFAP and vimentin. Cells resembling perineurial cells expressed $p75^{NTR}$, cytokeratin and SMA. Vimentin and SMA were found in the fibrotic component. About 2% of the cells expressed Melan A. Immunolabeling for periaxin was negative.

Conclusion: These findings are compatible with a neurofibroma with melanocytic differentiation. Expression of $p75^{NTR}$ and Sox2 in neoplastic cells may suggest SCs precursors or immature SCs as cells of origin. The presence of a melanocytic component may indicate melanocytes arising directly from SCs precursors, as described for the developing nerves. Moreover, $p75^{NTR}$, SMA and cytokeratin immunoreactivities in perineurial cells may indicate a myoepithelial cell lineage in pigs.

O52 COMPARISON OF THORACIC AORTIC BIOMECHANICAL PROPERTIES IN FRIESIAN AND WARMBLOOD HORSES

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Introduction: Thoracic aortic rupture is extremely rare in horses. The Friesian horse however shows a breed predilection. Considering the consistent location of the rupture near the scar of the ligamentum arteriosum Botalli and the high inbreeding rate, a genetic condition is likely. The aim of this study was to compare the biomechanical properties of the thoracic aorta between Friesian and Warmblood horses.

Materials and methods: 3 groups of horses were sampled: affected Friesian horses (n=5), healthy Friesian horses (n=7) and Warmblood horses (n=7). Aortic strips were obtained in the axial direction at 3 locations: the level of the ligamentum arteriosum outside the lesion (B), mid thoracic aorta (T1) and distal thoracic aorta (T2). Rectangular samples were used for uniaxial tensile testing and dogbone-shaped samples for tearing tests. Linearised stiffness, failure stress and viscoelasticity were evaluated.

Results: The measured mechanical values showed no significant interaction with the group of horse ($p>0,05$). There were however significant differences between the sample locations ($p<0.05$). The distal site of the thoracic aorta (T2) could withstand a higher maximum stress and was less compliant compared to the proximal sites (B and T1). The aorta at the ligamentum arteriosum was less visco-elastic compared to T1 and T2.

Conclusion: Regional mechanical differences were found over the length of the equine thoracic aorta. No significant mechanical differences were found between the different horse breeds. This suggests the existence of a local, hereditary defect at the level of the ligamentum arteriosum Botalli in the affected Friesian horses.

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